

Section 6: The BNAS Reuse Master Plan



This section of the BNAS Reuse Master Plan report describes and illustrates the specific land use, transportation, and open space elements that define the Plan, and that will establish the property as a unique asset within the greater Brunswick community and Midcoast Maine region.

Plan Vision and Intent



The Reuse Master Plan for the Brunswick Naval Air Station represents a unique opportunity to establish not only a vibrant live, work, play and educate environment, but also centers of excellence for technology innovation, environmental sustainability, and “green” community development. From an economic development perspective, the plan provides a framework within which a variety of corporate, business, academic, recreational, and community opportunities can flourish. From a community development perspective, the plan promotes a strong sense of place based on smart growth principles that will serve as a model for future sustainable development throughout the region.



Land Use and Transportation Framework

The structure and relationship between future land uses and the transportation system proposed for redevelopment of the base is described in this section. This includes a description of the proposed land use program; a description and a diagrammatic illustration of each of the land use districts; a summary of transportation and open space elements; and a discussion of how environmental conditions influenced the Reuse Master Plan.

Land Use Program

The land use program shown below provides a summary of proposed land use districts, with corresponding areas allocated for each land use type. As indicated on the exhibit, only 51% of the total base property has been allocated for development (approximately 1,630 acres); and, 49% (approximately 1,570 acres) of the base has been dedicated to a variety of active and passive areas for recreation, open space, and natural areas. This figure does not include parks, open space, and natural drainage or buffer areas that would be incorporated as part of the 1,630 acres planned for development. **Exhibit 66: Land Use Program Table** is color-coded to correspond with the land use districts shown on **Exhibit 65: Reuse Master Plan Map**.

Note: Matrix Design Group is the source of all exhibits in this Section.



Exhibit 65: Reuse Master Plan Map

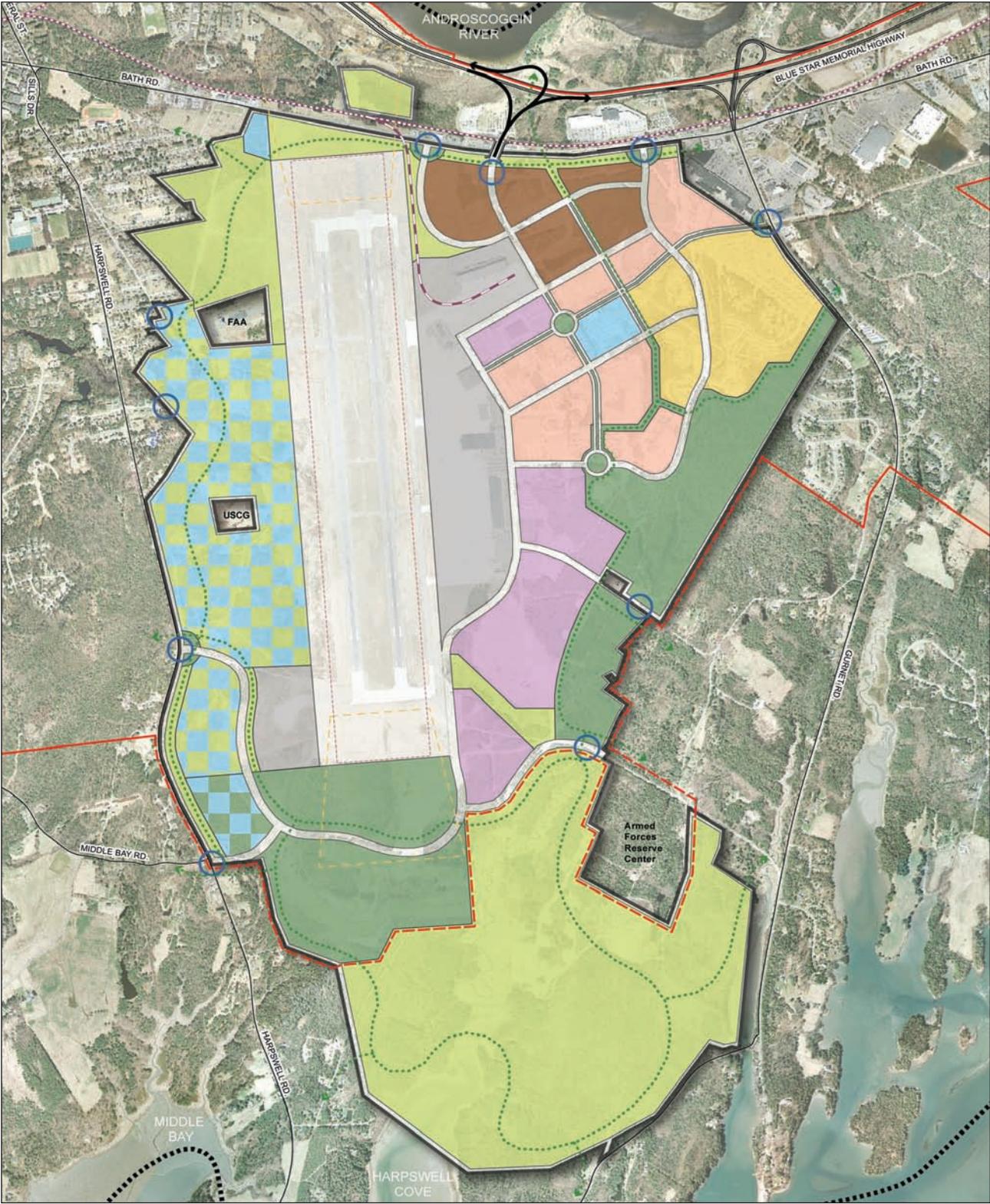


Exhibit 66: Land Use Program

Proposed Land Use Program

LAND USE DISTRICTS		SURPLUS ACRES	PERCENT OF TOTAL
Land Development	Airport Operations	500	16%
	Aviation-Related Business	230	7%
	Professional Office	120	4%
	Community Mixed Use	175	5%
	Business and Technology Industries	190	6%
	Education	200	6%
	Residential	215	7%
	SUBTOTAL	1,630	51%
Open Space	Recreation / Open Space	510	16%
	Natural Areas	1,060	33%
	SUBTOTAL	1,570	49%
GRAND TOTAL		3,200	100%

Legend

- B N A S Surplus Property
- Town of Brunswick
- State Highway
- Major Road
- Railroad
- Runway Protection Zone
- Runway Object Free Area
- Existing Town Growth Boundary
- Potential Town Growth Boundary
- Potential Pedestrian / Bike Trail
- Potential New Interchange
- Potential Railroad Spur
- Access Points

Notes:

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1. Checkered blue-light green area totals 320 acres, of which an undefined 175 acres have been assigned in the table above to Education and 145 acres to Natural Areas.
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2. Checkered blue-dark green area totals 30 acres, all of which has been assigned in the table above to Recreation / Open Space; however, Education would be an allowed use, if needed.
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3. Checkered light green-dark green (East Brunswick Transmitter Site) area totals 70 acres, of which an undefined 35 acres have been assigned in the table above to Recreation / Open Space and 35 acres to Natural Areas.
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4. The Runway Object Free Area provides a 500-foot buffer to the east and west of the two runways. The Airport Operations land use district extends an additional 500 feet beyond the Runway Object Free Area, resulting in a 1,000-foot buffer parallel to the runways.



**BRUNSWICK NAVAL AIR STATION
REUSE MASTER PLAN**



PLANNING DECISIONS WRIGHT - PIERCE ENGINEERS
ECONOMIC RESEARCH ASSOCIATES WBR ARCHITECTS + ENGINEERS



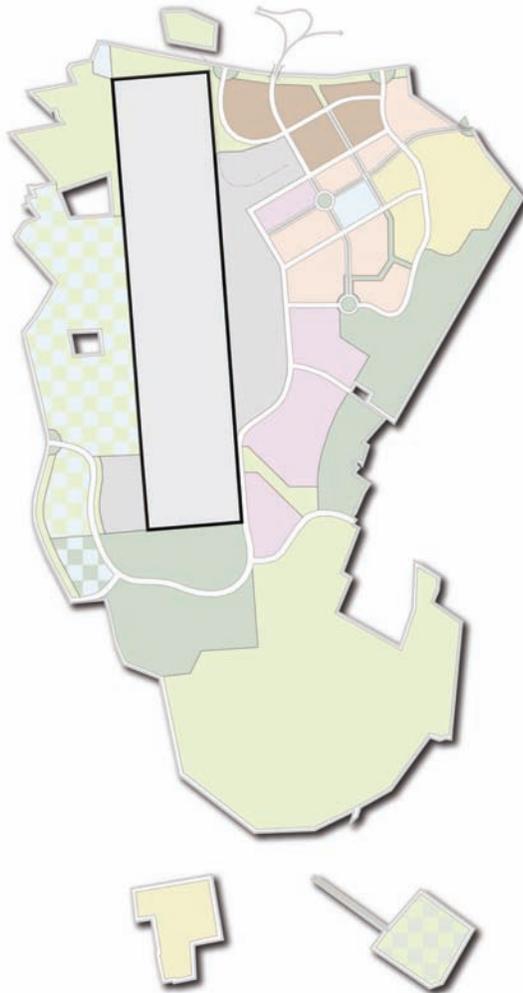
Land Use Districts

Based on the inventory and assessment of local, regional, and state market conditions, and influenced by the availability of existing on-base infrastructure and facility assets, the land use program described above is illustrated by the exhibits that follow.

Airport Operations District

The 500-acre Airport Operations district, shown in light gray on the plan, contains the two existing 8,000-foot long runways, taxiways and adjacent buffer zones surrounding the active airfield. **Exhibit 67: Airport Operations District Location Map** shows the location of this land use district.

Exhibit 67: Airport Operations District Location Map

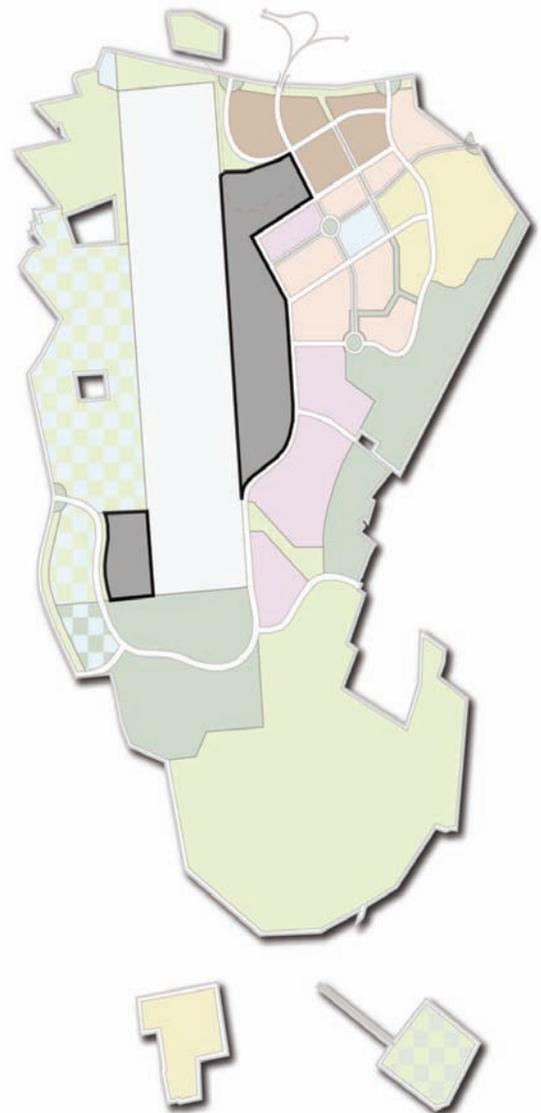




Aviation-Related Business District

The intent of the 230-acre Aviation-Related Business district, identified in dark gray on the plan, is to provide an area dedicated primarily to aviation-related business, industry, transportation and distribution, technology employment and other uses that rely on, or directly benefit from, proximity to airport facilities and operations. Such uses could include general and corporate aviation, aircraft maintenance / repair / overhaul, aviation-related manufacturing, and government and aerospace research and development. **Exhibit 68: Aviation-Related Business District Location Map** shows the locations of this land use district.

Exhibit 68: Aviation-Related Business District Location Map

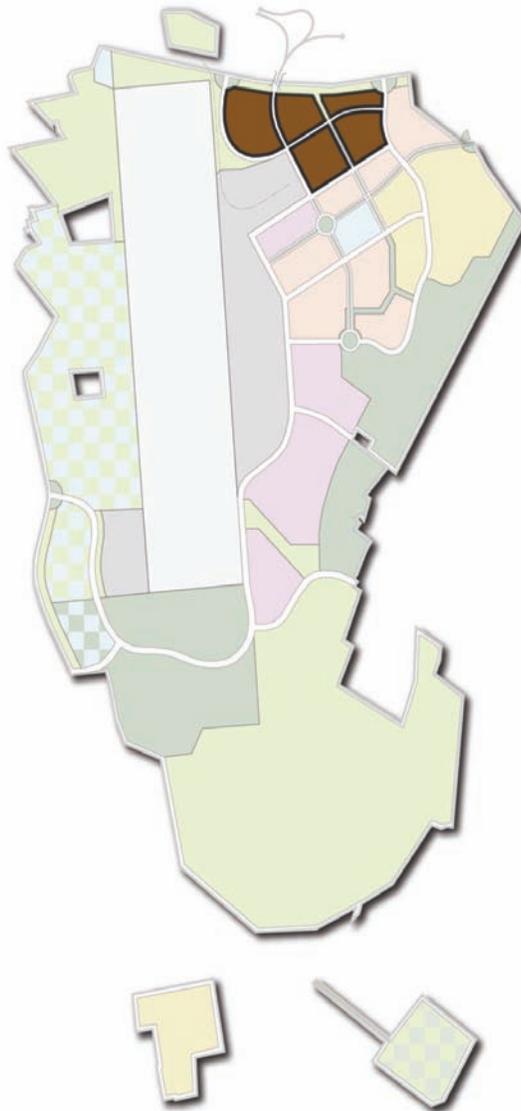




Professional Office District

The intent of the 120-acre Professional Office district, identified in brown on the plan, is to provide an employment center serving corporate and professional office needs of the area. Although some retail and community support uses such as hotels, food service, and day care could be integrated into this district, primary uses would be administrative, corporate, or professional offices such as law, medical, insurance, architectural, engineering, finance, real estate, and similar office uses. Uses can be accommodated within this zone in stand alone buildings, in a campus setting, or in a more compact office complex. **Exhibit 69: Professional Office District Location Map** shows the locations of this land use district.

Exhibit 69: Professional Office District Location Map

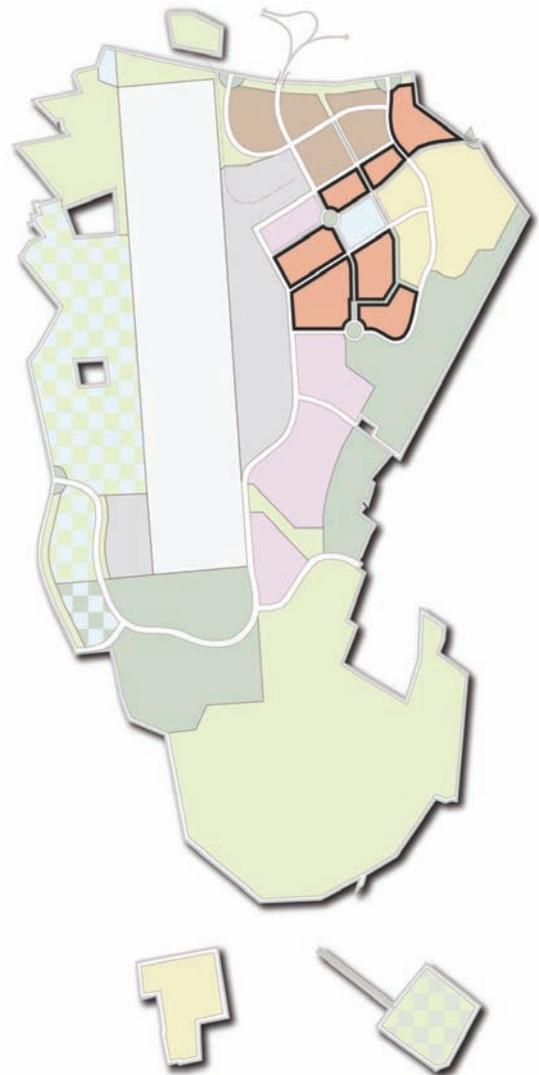




Community Mixed Use District

The intent of the 175-acre Community Mixed Use district, shown in light orange on the plan, is to provide a compact pedestrian-oriented mix of uses that will provide a variety of live, work, play and educate opportunities. Typical uses could include neighborhood-scale retail, professional offices, business and support services, restaurants, hotels and conference centers, health and fitness centers, day care centers, civic and cultural uses (such as churches, libraries, and museums), parks and government buildings. Also included would be a variety of higher-density attached housing types, such as town homes, condominiums and apartments (including affordable rental and home ownership, and assisted/independent care senior housing). **Exhibit 70: Community Mixed Use District Location Map** shows the locations of this land use district.

Exhibit 70: Community Mixed Use District Location Map

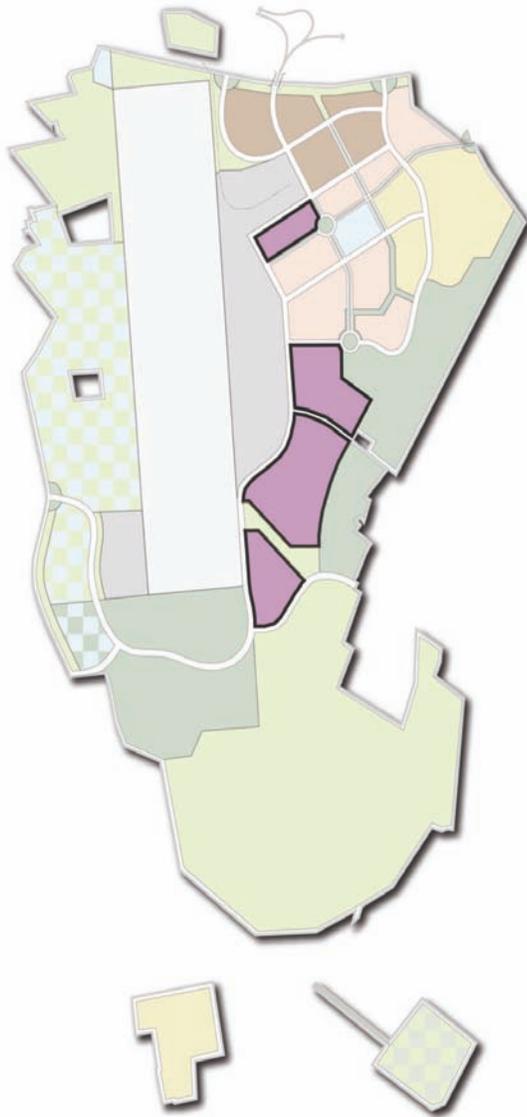




Business and Technology Industries District

The intent of the 190-acre Business and Technology Industries district, shown in purple on the plan, is to provide a high-tech employment center that would serve large-scale technology uses, such as technology-based research and development, energy park, laboratories, light manufacturing, and warehouse and distribution uses. Facilities could be developed as stand-alone buildings on several acres, or in a campus / corporate park setting. This district could also accommodate activities that are normally considered industrial in nature, but which produce few, if any, external effects that may be adverse to nearby properties or to the community in general. **Exhibit 71: Business and Technology Industries District Location Map** shows the locations of this land use district.

Exhibit 71: Business and Technology Industries District Location Map



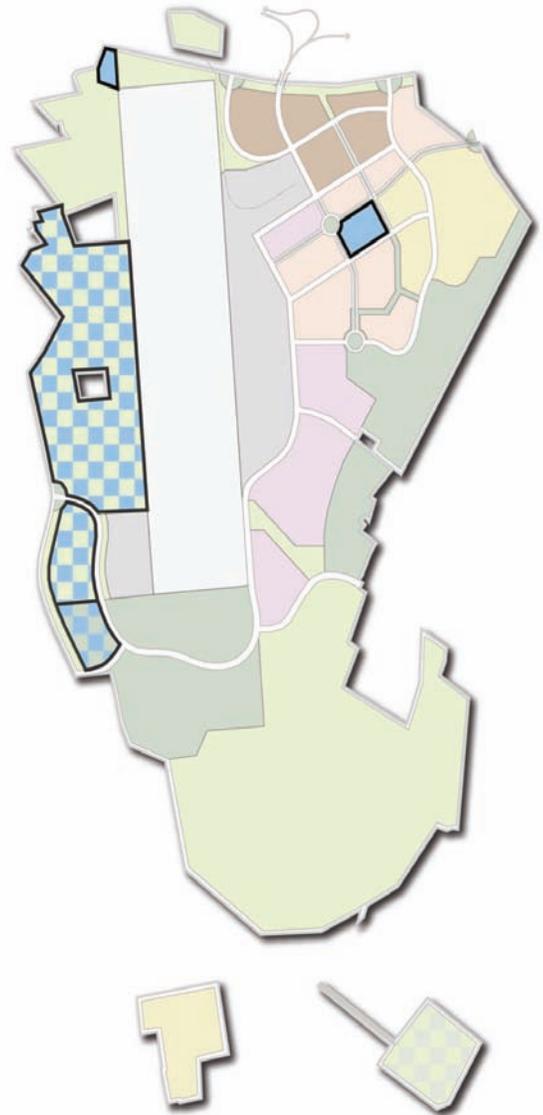


Education District

The intent of the 200-acre Education district, light blue on the plan, is to allow for university and college-level academic, administrative and support facilities. Typical uses include college classrooms, administrative and support facilities, athletic and sporting events, and student / faculty housing. More detailed studies are being conducted in the checkered areas to determine specific locations for educational versus natural area uses.

Exhibit 72: Education District Location Map shows the location of this land use district.

Exhibit 72: Education District Location Map

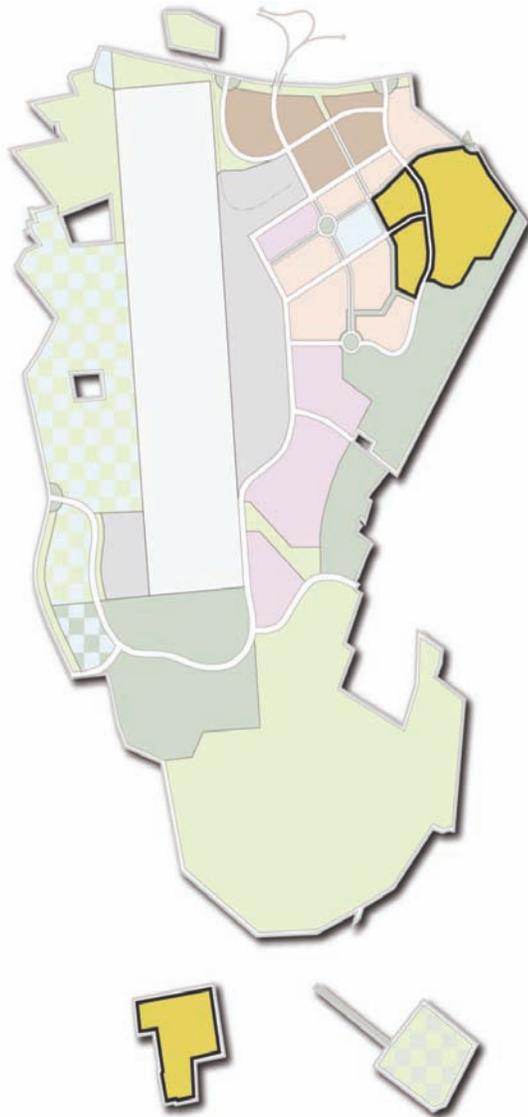




Residential District

The intent of the 215-acre Residential district, shown in yellow on the plan, is to provide for a variety of housing types in a compact, pedestrian-oriented setting. Typical uses will include single-family attached or detached, multi-family apartments, assisted / senior housing, and retirement / second homes. The proposed density for the McKean Street housing area is five dwelling units per acre and for the on-base housing areas eight dwelling units per acre. For residential uses in the Community Mixed Use districts, the proposed density is 24 dwelling units per acre. **Exhibit 73: Residential District Location Map** shows the locations of this land use district.

Exhibit 73: Residential District Location Map

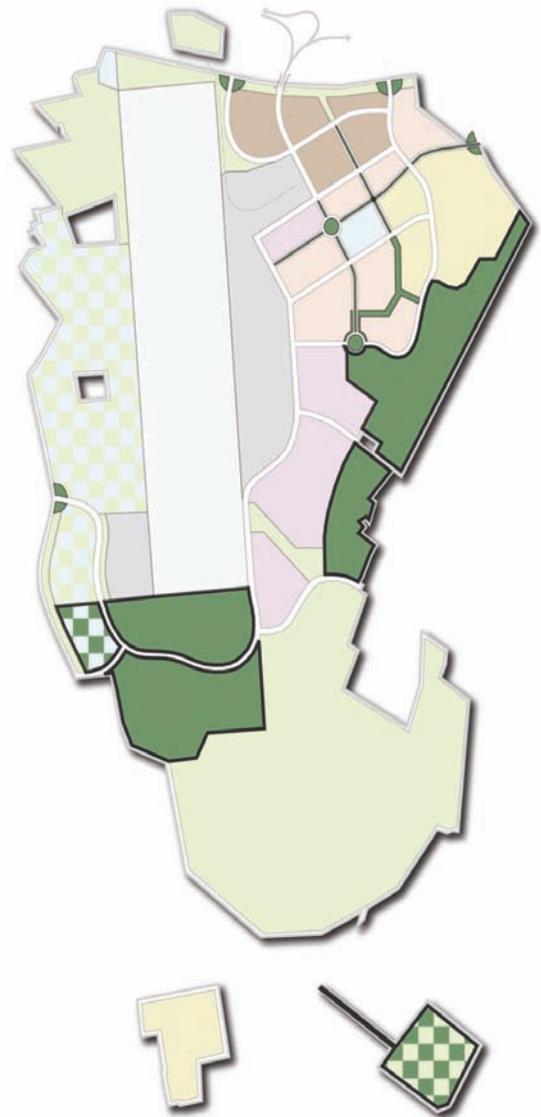




Recreation and Open Space District

The intent of the 510-acre Recreation and Open Space district, identified on the plan in dark green, is to provide suitable areas for a variety of commercial and public active and passive outdoor recreational opportunities for the community. Recreational activities could include public parks, recreation fields, golf courses, public gardens, bicycle trails, and equestrian facilities. **Exhibit 74: Recreation and Open Space District Location Map** shows the locations of this land use district.

Exhibit 74: Recreation and Open Space District Location Map

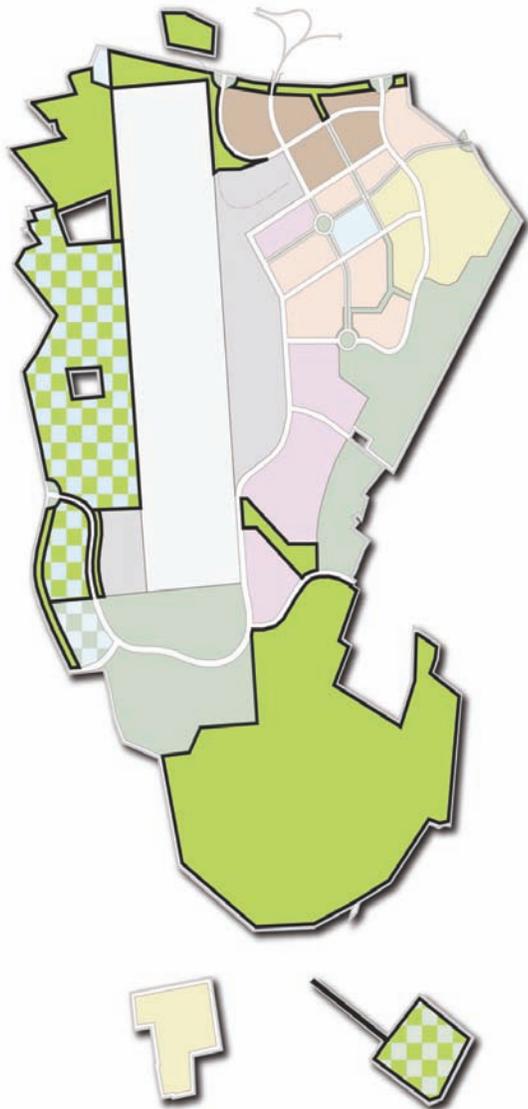




Natural Areas District

The intent of the 1,060-acre Natural Areas district, light green on the plan, is to preserve, maintain and enhance existing natural areas for the long-term benefit of area residents and the natural environment. As such, only those uses that would not significantly alter the environment and/or would provide opportunities to experience the environment would be considered, including pedestrian trails, nature and interpretive centers, environmental education, and other non-intrusive passive outdoor recreation and educational uses. More detailed studies are being conducted in the checkered areas to determine specific locations for natural versus educational uses. **Exhibit 75: Natural Areas District Location Map** shows the location of this land use district.

Exhibit 75: Natural Areas District Location Map





Transportation System

Through the course of the development of the Reuse Master Plan, efforts were made to identify both the nature and magnitude of transportation demands likely to be associated with redevelopment of the facility and the ability of the existing transportation systems to accommodate these demands. A recurring theme from the public was the desire to accommodate viable alternatives to single passenger automobile travel and the need to be sensitive to other land uses in the vicinity of the base. The transportation framework plan element of the Reuse Master Plan addresses both off-site and on-site capacity-related improvements with consideration of these issues. Following are a number of the key components of the Plan:

Facility Access

With the change in use of the base property, there will no longer be a need to maintain only two points of access for security reasons. It is proposed that the Bath Road entrance to the base be relocated to create a four-way intersection with Merrymeeting Plaza and close the existing entrance. In addition to relocating the primary access / gateway to the facility to better coincide with the present pattern of signalization on Bath Road, several key elements are proposed:

- ▶ Creation of a new connector spur and interchange connecting to US Route 1 west of the present interchange at Cook's Corner
- ▶ New secondary points-of-access onto the adjacent street systems at Bath Road / Gurnet Road / Harpswell Road

Internal Street and Roadway Network

Within the base property, there will be a number of changes in the existing street and roadway network:

- ▶ With the change in use and creation of connection points to Harpswell Road on the west and Gurnet Road on the east, there will be a transition in terms of the proportion of east-west versus north-south traffic flow patterns.
- ▶ With the changes in traffic patterns and land use, it will be possible to implement a logical system of street hierarchy and character. It is envisioned that primary arterial routes extending through the base will assume the character of boulevards and will serve a number of local and/or collector streets which provide direct access to the individual parcels. The design of these streets will include appropriate consideration of pavement width / geometry, landscaping, lighting, pedestrian features and utility accommodation / access.



Rail Service Considerations and Access

Historically, the base was served directly by rail, via an at-grade crossing of Bath Road. The rail spur extended into the site roughly parallel to the main base entrance. While it has been determined that re-creation of both passenger and freight rail access onto the site would present a key incentive for certain future development, the reintroduction of a grade crossing on Bath Road would present a number of challenges. Initial evaluation suggests that creation of grade separated rail access could be achieved through elevating Bath Road across the north end of the site, which would allow a new rail spur alignment further to the west.

Pedestrian Circulation and Walkability

As noted, significant public input focused on the need to create a facility characterized by “walkability.” The improvements contemplated within the plan will provide pedestrian access throughout, with a focus on connectivity with those types of land uses which tend to generate pedestrian traffic, or interface with other transportation modes. To ensure the development of a strong pedestrian and bicycle system as part of the base redevelopment, Town of Brunswick development standards and roadway transportation improvements must incorporate sufficient bicycle and pedestrian facilities.

Transit Interface

Plan development included a number of conversations with CoastalTrans, Inc., which serves as the primary local transit provider. It is proposed that transit stops will be located to correspond with complementary land use elements and transportation nodes.

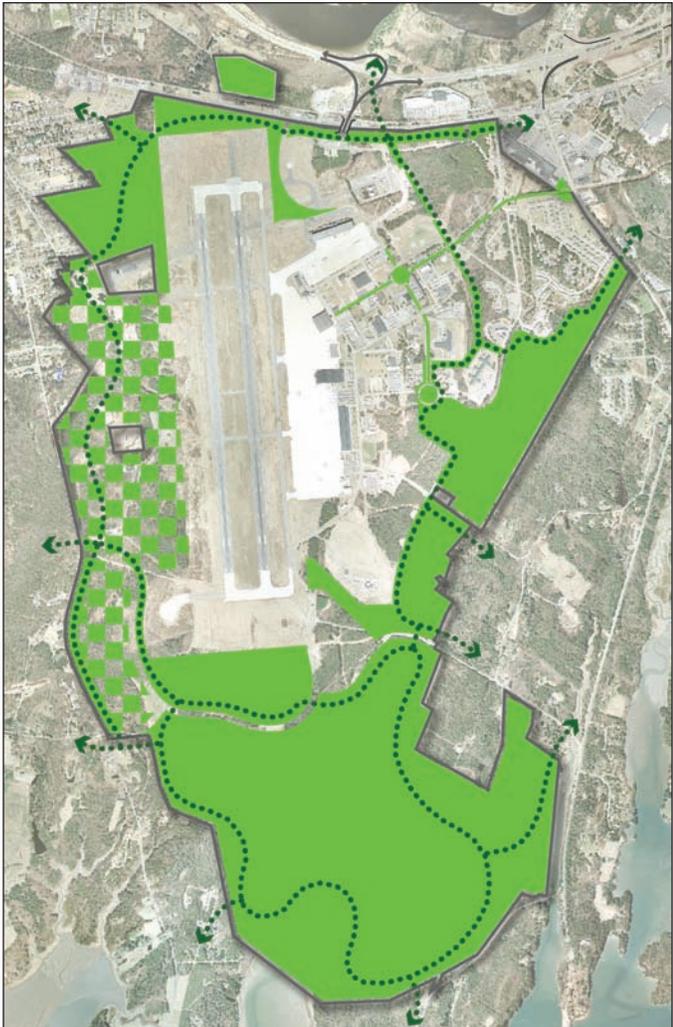
Other Environmentally Sustainable Transportation Modes

In addition to promoting pedestrian, transit and, potentially, passenger rail as key modes of transportation, the Reuse Master Plan has identified the desirability of facilities to support other environmentally sustainable elements, such as provision of bicycle racks and facilities necessary for operation of electric cars and buses.

Open Space System

Over 1,500 acres (49%) of the site are dedicated to open space and natural areas, where wetlands, drainageways, wildlife corridors and other sensitive natural systems are prevalent. Urban parks and formal open spaces are envisioned in the more developed areas, with pedestrian linkages to ensure connectivity not only throughout the property, but also into the adjacent neighborhoods and community. This approach promotes the concept of conservation and preservation of site and area-wide natural systems, while also providing a variety of locations and conditions for both active and passive recreational activities. **Exhibit 76: Open Space System Map** shows in green the areas designated in the Reuse Master Plan as either Recreation / Open Space or Natural Areas combined as a single Open Space system.

Exhibit 76: Open Space System Map



Source: Matrix Design Group

Environmental Influences

A detailed opportunities and constraints analysis was performed with respect to environmental conditions to help guide the development of the Reuse Master Plan. The analysis produced an implementation strategy that will best position designated land use districts for redevelopment. As a result, specific recommendations have been incorporated into the land use master plan, including:



- ▶ Minimization of residential development in areas with environmental contamination
- ▶ Location of the golf course over the Eastern Plume to provide recreational outdoor activities, while limiting potential for structures that may result in indoor air issues and elevated risk to human health
- ▶ Placement of golf course club house location off the Eastern Plume footprint to limit indoor air impacts
- ▶ Boundaries around the landfills have been modified where appropriate to avoid segregation of the landfill into several land uses (so as to not split any short or long term obligations)
- ▶ Zoning or long-term planning for the landfill areas will incorporate use designations with consideration of the landfills. For example, placement of a parking lot over the landfills may be appropriate with limited cap revisions, whereas placement of buildings would be more difficult given the existing conditions and long term monitoring requirements
- ▶ The Explosive Ordnance Disposal Training Area (Site 12) and other uninvestigated munitions areas have been designated as open space
- ▶ Like-use as an airport will result in a less stringent remediation (i.e., industrial cleanup standards) for this land use district as opposed to some other use, such as mixed use or residential use that would require additional remediation
- ▶ Reuse of the existing hangars as industrial uses results in less stringent cleanup standards
- ▶ Identifying the many data gaps for the environmentally impacted sites in the “Front Door” area has prioritized the additional investigation necessary for this area. This land use district is a proposed professional office campus and with attentive environmental planning, the redevelopment of this area can proceed smoothly and more quickly